

## Software Engineering Fundamentals - Tutorial

### Class and object diagrams

#### Week 4

#### Objective

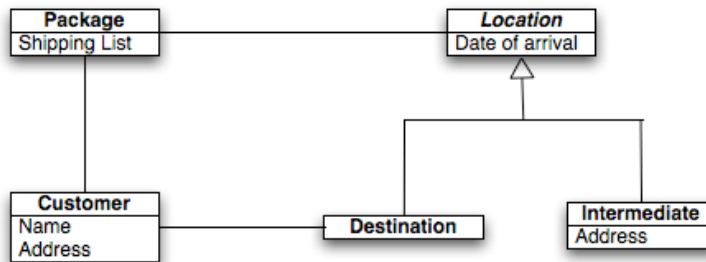
To practice drawing and critically analyse class & object diagrams.

#### Q1

Form into groups of 3 - 4 people. You should ensure that a different person draws each diagram.

##### a)

Consider the following class diagram. At the moment it lacks multiplicity symbols. What should they be?



Why isn't the attribute "Address" in the Intermediate class placed into the class Location?

Based on this diagram draw object diagrams for each of the following scenarios.

##### b)

A package is delivered to a customer on the 5th August. She received another package 2 days before.

##### c)

An iPhone is en-route to being delivered. It left its factory in Shanghai on 23rd July. It was delivered to an international shipping port in Singapore on 25th July, and landed in Melbourne on 1st August. Jim had the package delivered to him on 3rd August.

#### Q2

Identify possible classes from the following description.

A security company provides camera systems for customers. Each camera has an IP address (so it is accessible via the internet).

The company installs the cameras and runs software that allows the customers to administer them.

Successive images from each camera are compared - if there is any motion detected then an alert is sent to a nominated person via either email or SMS.

Each camera can be assigned to a camera group (zero or more cameras) so that you can nominate a single person to look after multiple cameras. This is to simplify the process of changing the allocations when a staff member leaves or goes on holidays.

Customers can group their cameras up into whatever grouping they would like.

(Note: this was the problem that students in **Software Engineering : Process and Tools** had to implement this year).